

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



537747



(43) International Publication Date  
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number  
**WO 2004/052890 A1**

(51) International Patent Classification<sup>7</sup>: C07D 471/04, 405/12, 409/12, 213/73, 401/12, 495/04, A61K 31/4427, A61P 31/04

12203 (US). XIE, Dejian [CN/US]; 15 Harwick Drive, Glenmount, NY 12077 (US). DECORNEZ, Helene, Yvonne [FR/US]; 79 Deer Run Hollow, Clifton Park, NY 12065 (US).

(21) International Application Number:

PCT/US2003/038706

(74) Agents: TAFT, Kingsley, L. et al.; Foley Hoag LLP, 155 Seaport Boulevard, Boston, MA 02210-2698 (US).

(22) International Filing Date: 5 December 2003 (05.12.2003)

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/431,406	6 December 2002 (06.12.2002)	US
60/465,583	25 April 2003 (25.04.2003)	US

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): AFFINUM PHARMACEUTICALS, INC. [CA/CA]; 100 University Avenue, 10th Floor, South Tower, Toronto, Ontario M5J 1V6 (CA).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

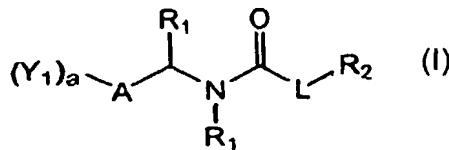
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors; and

(75) Inventors/Applicants (for US only): BERMAN, Judd [US/CA]; 116 Hillmount Avenue, Toronto, Ontario M6B 1X8 (CA). SAMPSON, Peter [CA/CA]; 108-107 Redpath Avenue, Toronto, Ontario M4S 2J9 (CA). PAULS, Heinz, W. [CA/CA]; 460 Fourth Line, Oakville, Ontario L6L 5A4 (CA). RAMNAUTH, Jailall [CA/CA]; 101-200 Lothrop Pathway, Toronto, Ontario M6B 2G9 (CA). MANNING, David, Douglas [US/US]; 442 Van Patten Road, Duaneburg, NY 12056 (US). SURMAN, Matthew, David [US/US]; 488 Spring Hollow Court, Albany, NY

WO 2004/052890 A1

(54) Title: HETEROCYCLIC COMPOUNDS, METHODS OF MAKING THEM AND THEIR USE IN THERAPY



(57) Abstract: In part, the present invention is directed to antibacterial compounds of formula (I) wherein A is a bicyclic heteroaryl ring or a tricyclic ring and R<sub>2</sub> is an heterocyclic residue; L is a bond, or L is alkyl, alkenyl or cycloalkyl.